

Two Variations of *Pteridium aquilinum*¹

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The specimens cited below are preserved in the herbarium of the Department of Agriculture, Ottawa, Canada (DAO), or in the Marie-Victorin Herbarium of the Botanical Institute of the University of Montreal (Mtr).

Pteridium aquilinum (L.) Kuhn var. *latiusculum* (Desv.)

Underw.

RANGE EXTENSION:

MANITOBA: Riding Mountain National Park, Forestry camp, roadside, common in patches, July 13, 1948, *J. S. Rowe* 330 (DAO); Victoria Beach, July, 1929, *M. G. Dudley* (DAO); Indian Bay, June 7, 1941, *M. G. Dudley* (DAO); Sandilands Forest Reserve, common in dry pine woods, July 13, 1949, *A. J. Breitung* 7905 (DAO); Lac du Bonnet, precambrian rock outcrops, common, July 7, 1949, *A. J. Breitung* 7478 (DAO).

ALBERTA: Waterton, woods above Cameron Creek, August 28, 1939, *E. H. Moss* 500 (DAO); Waterton Lakes Park, Lodgepole Pinewoods, August 21, 1941, *E. H. Moss* 1291 (DAO).

This variety has been known to occur in Manitoba for perhaps as much as half a century. However, it was not mentioned for that province in the monograph of the genus by R. M. Tryon, Jr.²

Pteridium aquilinum var. *champlainense* Boivin, var. nov.

Frons (3)–4–6–(10) dm. longa, vernatio aequalis; lamina (2.0)–2.5–4.0–(6.0) dm. longa, ovata vel late ovata nunquam ternata; rachis puberulenta; pinnulae supernae puberulentae, margine ciliatae, infernae pubescentes, saepius oblique insertae.

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² *Rhodora* 43: 1–31, 37–67. 1941.

QUEBEC: CHARLEVOIX: Les Eboulements, Saint-Joseph, alt. env. 300 m., le long d'un fossé, 25 juin, 1937, *Boivin* 1066 (DAO type, Mtr.). ARGENTEUIL: Grenville Twp., Conc. 2, lot 21, Rouge River, path by river, August 13, 1941, *Minshall* 2600 (DAO). PONTIAC: Bristol Twp., Norway Bay, near Wharf Road, sandy places, August 4, 1941, *Zinck* 1035 (DAO). MONTCALM: Rawdon, 20 août 1927, *Roy* 95 (Mtr). BEAUCE: East Broughton, terrains serpentiniteux, 27 août, 1940, *Victorin*, *Boivin* and *Kucyniak* 4118 (DAO, Mtr). MEGANTIC: Black Lake, sur les collines de serpentine, 11 août, 1936, *Victorin*, *Rolland* and *Dominique* 46 688 (Mtr). TÉMISCOUATA: Lamy-sud, colline exposée, 8 juillet, 1938, *Kucyniak* and *Tardif* 199 (Mtr); id., endroit exposé, champ ouvert, 206 (Mtr).

ONTARIO: NIPISSING: North Bay, railway gravel, Sept. 13, 1945, *Groh* 2625 (DAO). THUNDER BAY: Sibley Twp., Lake Marie Louise, September 4, 1936, *Taylor*, *Losee* and *Bannan* 58 (Mtr).

MANITOBA: Hadashville, July 18, 1936, *E. T. Howe* (DAO).

MICHIGAN: KEWEENAW: Keweenaw Péninsula, Copper Harbor Cemetery, openings in woods in sandy soil, August 28, 1949, *Frankton* and *Senn* 1106 (DAO); open rocky summit of East Bluff, July 19, 1950, *C. D. Richards* 3737 (DAO).

This variety has the size, insertion of pinnules, and veneration characteristic of var. *latiusculum* (Desv.) Underw., but the ovate limb and non-ternate appearance characteristic of var. *pubescens* Underw. The pubescence is similar to that of the latter, but much less dense, the former being glabrous beneath or pubescent along the midnerves only. Other specimens reported as var. *pubescens* for Bruce Peninsula (Ontario) and Mackinac Island (Michigan) probably belong to this new variety.

Of the latter, R. M. Tryon, Jr., once wrote³ as follows:

"In Michigan, Ontario, and Quebec var. *pubescens* probably occurs as a pre-glacial relic on or related to local nunatak areas."

This statement of Tryon appears to be basically correct when applied to var. *champlainense*, but on the basis of the additional data now available it seems possible

³ *Rhodora* 43: 29. 1941.

to draw a fuller picture of the interglacial and postglacial history of this variety as follows:

Pteridium aquilinum (L.) Kuhn may have become transcontinental across Canada during the last interglacial stage. The advance of the Wisconsin glacier presumably destroyed a large part of the distribution of this species, especially the northern part, leaving var. *pubescens* limited to the western United States and perhaps adjacent Canada, var. *champlainense* more or less isolated around Lake Superior (Keweenaw, Sibley, and Bruce Peninsulas) and var. *latiusculum* with a split-up range, part along the eastern slopes of the Rockies, part in the eastern United States. As the glacier began to disappear, var. *pubescens* was able to move northward to a limited extent, and var. *champlainense* was able to spread along coastlines as far west as the eastern shore of Lake Agassiz (Hadashville), north and east along the north shore of Lake Algonquin (North Bay), along the north shore of the Champlain Sea (Norway Bay, Rouge River, Rawdon, Les Eboulements), and to some extent across on the south shore (East Broughton, Black Lake, Lamy-sud), thus reaching its maximum distribution during the Champlain Sea period, and hence the name.

With the further disappearance of the glacier and the regression of the Champlain Sea, the more aggressive var. *latiusculum* was able to move north and west into the newly available territory, to become by far the commoner variety from southern Manitoba eastward, while var. *champlainense* was able to persist only in a few isolated localities along former and present shorelines.

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